

# Appendix A



Consensus #1

BB1193DIVSeqIdNo10  
GI 4325324  
GenBank X94451

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.....  
10      20      30      40      50      60  
LSLHLLRVSPSPFSRSPHLNEALVSRDMASGLEEKL-AGLSTGCGDQNPFPAGEGGE 59  
ME-----GAADQTTKALSELAMDSSTTLNAAESSAAGDGAER----- 37  
MD-----SSVST 8
```

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...SKNA.K.E.K.K..E.....E...KA.....D.TQY..NR  
70      80      90      100     110     120  
PQLSKNAKKRREKRKKLEERRRLKEERKKNKKA-AAASGKPPQKASFAADDDDDDDPTQVYNNR 118  
--SKNAKKKEQKMKQKEERKRRKDDEKAEKAKQAAPKASSQKAVAAADDEEMDA TQVYNNR 94  
P-LSKNAKKREKKAKEKEQL-----RQEKKAAAVAKRQMEQHNLPENDDL DPTQVYLANR 61
```

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L.....G.NPYPHKF....S.P..I..Y..L..G.....LAGR...KR.SSS  
130     140     150     160     170     180  
LKA L D S L K A T G V N P Y P K K F P V G I S V P E Y I E K Y R T L S E G E K L T Q V A E C L A G R I M N K R T S S S 178  
L K Y L A A E K A K G E N P Y P K K F A V S W S K P K Y I E T Y G S L N N C D H V E N A E E S L A G R I M S K R S S S 154  
L R N I E S L R E S G I N P Y P K K F F I T M S K P P F I S R Y A H L N T G E F P F D I D M S L A G R V I S K R A S S 121
```

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	190	200	210	220	230	240
KL.FY.L.G...	VQV.A.A.S.D..F...	S..KRGDI.G..G.PGK..RGELS.F				
KLFFYDL	YGGCM	KVQVMADART	SELDFAEF	SKYHSGVKRGDT	VGIC	GYPGKSN
KLFFYDL	YHGFDF	KVQVMADASK	SGLDFAEF	LKLHSA	AKRGDT	VGWIG
KLFFYEL	LLGCCAR	VQVVLASARD	SDVDAVQFS	NYQSGVKRGDT	ICWR	BYPGKSKRGH

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...F..L..CLHM.PR.....W.PG..RN.E.YVL.DQE.RY

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P	K	R	F	V	L	S	P	C	L	H	M	P	R	Q	K	G	E	G	S	A	-	P	--	--	--	--	V	P	T	P	C	M	G	R	N	I	E	N	X	V	L	R	D	O	B	E	R	V		286										
P	R	S	F	I	L	S	H	C	L	H	M	P	R	K	A	D	N	V	N	A	K	P	--	--	--	--	E	I	V	P	G	Q	T	R	N	P	E	A	X	V	L	K	D	O	B	E	R	V		263										
A	K	P	F	I	V	L	A	P	C	L	H	M	L	P	R	L	T	S	S	I	V	D	E	T	R	T	Q	N	F	Q	G	I	T	A	Y	D	T	W	N	P	G	D	L	R	N	P	E	S	X	V	L	R	D	O	B	E	R	V		241

## Consensus #1

RQR.LD...N.EVR...F.TR...I.S...R.FLD...FLEVE<sup>\*</sup>TP.MN..AGGA.ARPF.THH

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[illegible]

## motif 1

# Appendix A

motif 2

Consensus #1	N.L...L..R..PELYLK.L.VGG	.RVYE.GK.FRNEG.DLTH.PEFT.CE.YMA.ADY	
	370	380	390 400 410 420
BB1193DIVSeqIdNo10	NELNMRLLFMRIAAPHLYLKLELVVGG	DRVYELIGKQFPRNEGLEDTHNPR	PTTCBEPYMAVADY 406
GI 4325324	NLDLMRLYMRIAAPHLYLKQLIIVGG	ERVVYELIGKQFPRNEGLEDTHNPR	PTTCBEPYMAVADY 383
GenBank X94451	NELDTEELIRVSPHLYLKKLVVGG	DRVYELIGKHFRNEGMDLTHSPH	PTMCELYMAVADY 361
Consensus #1	NDLM...TE..LSGMVK.LTG.YKI.Y.ANG....PIEIDFTPPFR.I.M...LE..A...		
	430	440	450 460 470 480
BB1193DIVSeqIdNo10	NDLMBLLTEETMISGMVKKDLTGGYKIKYHANGVTNP	PIEIDFTPPFRRI DMKKDL EAMANKS	466
GI 4325324	NDLMTMTETVMLSGMVKKELTGGYKIKYHANGYDKD	PIEIDFTPPFRRI DMKKDL EAMANKS	443
GenBank X94451	NDLMDLTQQLSGMVKKDLTGSYKIRYHANGLDNE	PIEIDFTPPFRRI DMKKDL EAMANKS	421
Consensus #1	IP.DL.S..AN..L...C...DVKCPPP.TT.RLLDKLVG.F.E..C.NPTFFIN.PEIM		
	490	500	510 520 530 540
BB1193DIVSeqIdNo10	IPKDLSSDEANRYYLIEACVZYDVKCPPPQTTSRLLDKLVGHHFL	ETCVNPTFFIINRPTIM	526
GI 4325324	IPKDLASDFANKYYLIDACARFDVKCPPPQTTSRLLDKLVGHHFL	ETCVNPTFFIINRPTIM	503
GenBank X94451	IPRDLSSDSANKHLLVDVGEKFDVKCPPPHHTTTRLLDKLVGHHFI	ETCVNPTFFIINRPTIM	481

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Consensus #1	SPLAK...RS...GLTERF*LF.N...*E.C.AYTELNDF...QR.RF...QLKDRQ.GDDEAM.L	550	560	570	580	590	600			
BB1193DIVSeqIdNo10	SPLAKWRRSR	PPGLTERRFELFVNKKHTV	CNAYTE	LNDDPVVQRQRTE	EQ	LKDRQSGDDHAAAL	586			
GI 4325324	SPLAKWRRSR	KSLTERRFELFVNKKHTV	CNAYTE	LNDDPVVQRQRTE	ADQLKDRQSGDDHAAAL	563				
GenBank X94451	SPLAKSRRSE	PPGLTERRFELFVNRRHTL	CDAYTE	LNDDPTAQRERFAEQ	LKDRQLGDDHAAADL	541				
Consensus #1	DE.F...ALEYGL.PTGG.G.GIDRL.MLLTDS.N.KEV...FFPAM.....	610	620	630	640	650	660			
BB1193DIVSeqIdNo10	DETPCTAL	YGLAPTGGWGLGIIDRL	TMELT	DSQN	IK	EV	LTPAMK	PQE	634	
GI 4325324	DETPCNAL	YGLAPTGGWGLGIIDRL	SMELT	DSLN	IK	EV	LTPAMRPP	PQESAAQAPL	TE	623
GenBank X94451	DESFI	TALYGLPTGGLEMG	IDRL	TMELT	DSQN	VKEV	LTPAMRLQ			588
Consensus #1	...	motif 3								
BB1193DIVSeqIdNo10									634	
GI 4325324	EKK								626	
GenBank X94451									588	

Consensus #1: When all match the residue on the Consensus show the residue of the Consensus, otherwise show ‘.’

Shade (with black at 40% fill) residues that match the Consensus named “Consensus #1” exactly.

The three highly conserved motifs (1, 2 and 3) are indicated by boxes. Residues which are important for substrate binding are indicated by asterisks.